clarion

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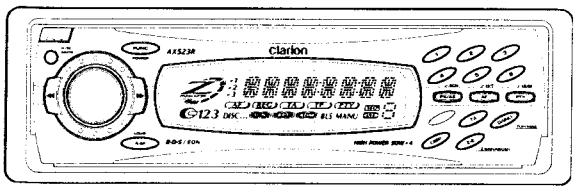
Service Manual



(AX523R)

RDS-EON/FM/MW/LW
Radio Cassette Combination

Model **AX523R**
(PE-1736E-A for Europe)

■ SPECIFICATIONS

Radio section

Tuning system:	PLL synthesizer tuner
Receiving frequencies:	FM 87.5 to 108MHz MW 531 to 1,602kHz LW 153 to 279kHz

Tape deck section

Wow & Flutter(WRMS):	0.08%
Channel Separation(1kHz):	35dB
Signal to noise ratio:	58dB(Metal)
Frequency response(±3dB):	30 to 20KHz(Metal)

General

Power output:	4x31W (DIN45324,+B=14.4V)
Power supply voltage:	DC 14V(10.8 to 15.6V allowable)
Current consumption:	Less than 15A
Speaker impedance:	4Ω (4Ω to 8Ω allowable)
Dimensions(mm):	178(W) x 50(H)x155(D)
Weight:	1.3kg

■ NOTE

We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.

■ COMPONENTS

PE-1736E-A

Source unit	————	1
Mounting bracket	300-7742-00	1
DCP case	335-6035-20	1
Outer escutcheon	370-6009-00	1
A-Lead	850-6681-50	1
Parts bag	————	
Removal Key	331-2497-00	2
Screw	716-0726-01	1
Spacer	345-3653-20	1

※ Specification and design are subject to change without notice for further improvement.

■ To engineers in charge of repair or inspection of our products.

Before repair or inspection,make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable.The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.
   For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.
   If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.
3. Check for safety after repair.
   Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.
   If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to theparts for the automobile.
   Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
5. Cautions regarding chips.
   Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.
6. Cautions in handling flexible PWB.
   Before working with a soldering iron, make sure that the iron tip temperature is around 270°C. Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.
7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

■ Notes of ISO Connector

1. For VW and Audi vehicles, change the position of fuse installation as shown on the diagram. (Figure 1)

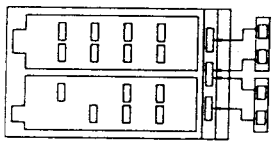
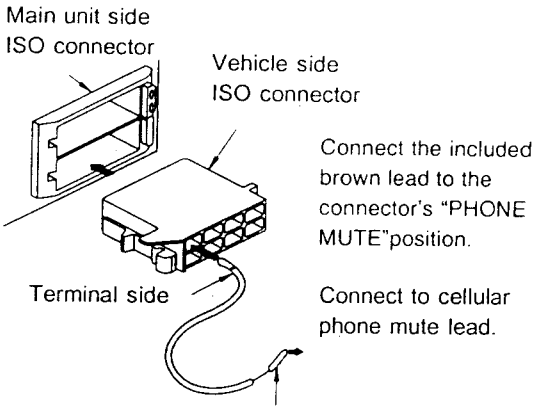


Figure 1

2. The lead include with the unit must be connected to specified position of the vehicle's ISO connector in order to use the "triggered audio mute for cellular telephones" function. (Figure 2)


Main unit side ISO connector
Vehicle side ISO connector
Connect the included brown lead to the connector's "PHONE MUTE"position.
Terminal side
Connect to cellular phone mute lead.

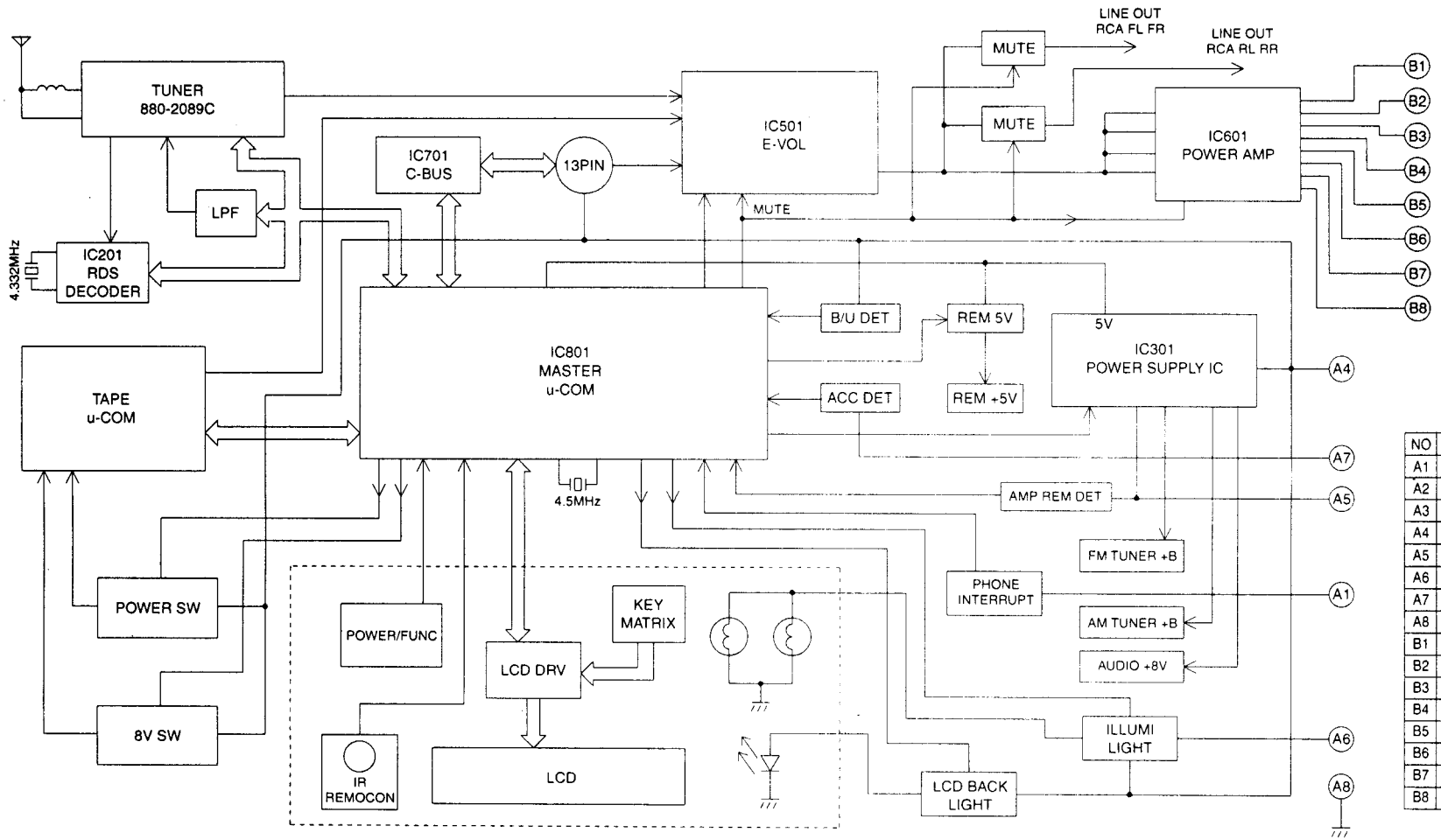
Fasten using insulating tape,etc., to prevent short-circuits at the connection.

Figure 2

■ Adjustment

Item	Procedure	Procedure
RDS S-Meter	1. Input the 98.1MHz/30dB (400Hz, 75kHz DEV,AF88%) signal and modulation OFF. 2. Adjust VR on top of the tuner so that the output level at the TP (S-Meter) on main PWB is 2.4±0.1V	-SSG -Multiplex Signal Generator -Millivoltmeter
S-Meter	1. Input the 98.1MHz/30dBμ/400Hz(Main90%+Pilot10%)signal 2. Turn on the power switch and press the AF button and 2 seconds.(Test Mode) 3. Adjust the reading of LCD indicator to [30----00] 3.0±0.2V by VR1.	-SG
Tape Speed	1. Insert a wow speed tape, and adjust speed-VR of main motor so that a reading of wow flutter meter is 3000----3090Hz	-Wow speed Tape -Wow flutter meter

BLOCK DIAGRAM



C-BUS UNE

NO	NOTE
1	SI/SO
2	SCK
3	NC
4	SRQ
5	REM +B
6	S-GND
7	CD-L-IN
8	CD-R-IN
9	NC
10	B/U
11	ACC-CONT
12	GND
13	NC

NO	CONNECTION
A1	PHONE INTERRUPT
A2	NO CONNECTION
A3	NO CONNECTION
A4	BACK UP
A5	REMOTE TURN-ON
A6	ILL
A7	ACCESSORY
A8	GROUND
B1	SPEAKER REAR/RIGHT +
B2	SPEAKER REAR/RIGHT -
B3	SPEAKER FRONT/RIGHT +
B4	SPEAKER FRONT/RIGHT -
B5	SPEAKER FRONT/LEFT +
B6	SPEAKER FRONT/LEFT -
B7	SPEAKER REAR/LEFT +
B8	SPEAKER REAR/LEFT -

AX52FR

■ EXPLANATION OF IC

■ μP D178018AGC-594-3B9 052-1913-20

Outward Form

80 pins, plastic QFP

Terminal Description

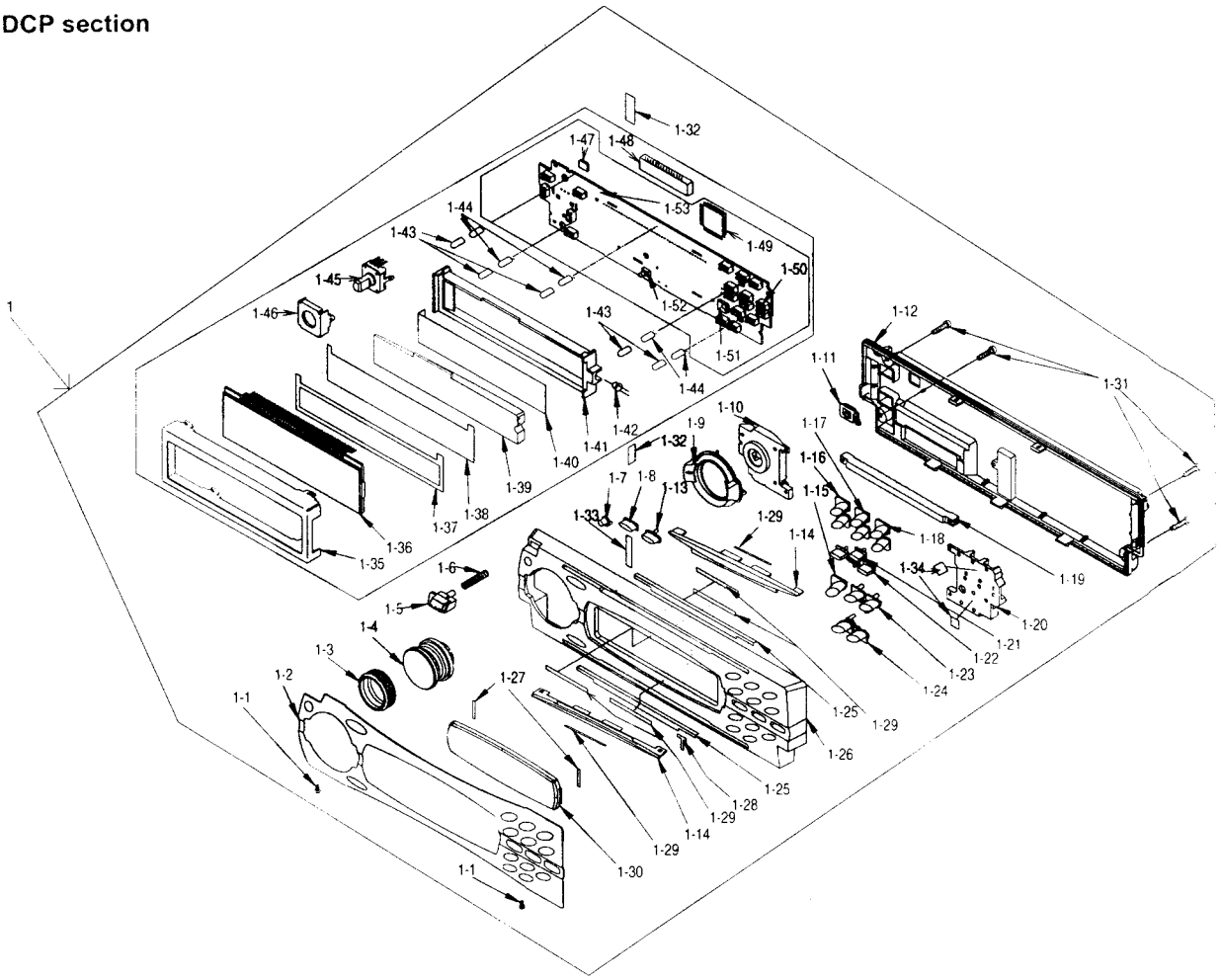
Pin No	Symbol	I/O	Function
1	KEY A/D	I	DCP Detect
2	RDS S-METER	I	RDS Signal Meter Input
3	RDS NOISE	I	RDS Noise Input
4	VOL_CW	I	E-VOL CW Input
5	VOL_CCW	I	E-VOL CCW Input
6	RDS_DISCHG	O	RDS Noise off
7	LCD SI	I	LCD Driver SI
8	LCD SO	O	LCD Driver SO
9	LCD SCK	O	LCD Driver SCK
10	LCD CE	O	LCD Driver Chip Enable
11	C-BUS SRQ	-	N.C
12	C-BUS SI	I	N.C
13	C-BUS SO	O	N.C
14	C-BUS SCK	O	N.C
15	N.C	-	Open
16	SYS MUTE	O	System Mute Output
17	REM + 5	O	5V power supply control terminal
18	STAND BY	O	REM+B Control
19	E-VOL CLK	O	E-VOL CLK
20	E-VOL DATA	O	E-VOL DATA
21	GND	-	GND(Port)
22	VDD	-	VDD(Port)
23	FM_ON	O	FM Power Supply
24	AM_ON	O	AM Power Supply
25	MUTE SPEED	O	Mute Speed up Control
26	IF REQ	O	Outputs Hi during SEEK
27	ST	O	ST(RDS Test)
28	AM IF CNT	I	AM IF Count Input
29	FM IF CNT	I	FM IF Count Input
30	VDD	-	PLL VDD
31	FM OSC	I	Inputs FM local osc frequency
32	AM OSC	I	Inputs AM local osc frequency
33	GND	-	PLL GND
34	FM VT	O	FM LPF EO(VCO)
35	AM VT	O	MW/LW LPF EO(VCO)
36	GND	-	GND
37	U/K	I	Active Lo
38	J/U	I	Active Lo
39	SD/ST_IND	O	Connect to Tuner SD/ST
40	RDS MUTE	O	RDS MUTE Active Hi

Pin No	Symbol	I/O	Function
41	AM DX/LO	O	AM DX/LO High=DX
42	AMP REM-DET	I	GND
43	SLAVE ON	O	47K to ACC+5V
44	B/L+B	O	N.C
45	N.C	-	N.C
46	FM DX/LO	O	FM DX/LO High=Local
47	N.C	-	N.C
48	N.C	-	N.C
49	PHONE AUDIO	I	GND
50	N.C	-	GND
51	N.C	-	GND
52	N.C	-	GND
53	N.C	-	GND
54	N.C	-	GND
55	N.C	-	GND
56	N.C	-	GND
57	N.C	-	GND
58	N.C	-	GND
59	N.C	-	GND
60	N.C	-	GND
61	FWD/REV	I	Cass Play High=Rev
62	FF/REW	I	High=Rew
63	MOTOR ON	O	Cass Motor On
64	TAPE IN	I	Tape Detect
65	L/M	-	N.C
66	RDS DATA	I	RDS Data In
67	RDS CLK	O	RDS Clock
68	B/U DET	I	Back-up Detect
69	ACC DET	I	ACC Detect
70	REMOCON	I	N.C
71	KEY INT	I	Connect to Key A/D
72	N.C	-	N.C
73	PHONE INT	I	N.C
74	CPU REG	-	CPU Regulator
75	GND	-	GND
76	XOUT	O	4.5MHz Cristal
77	XIN	I	4.5MHz Cristal
78	OSC REG	-	OSC Regulator
79	VDD	-	VDD +5V
80	RESET	I	System Reset

Note : This is selected at initial retail setting.

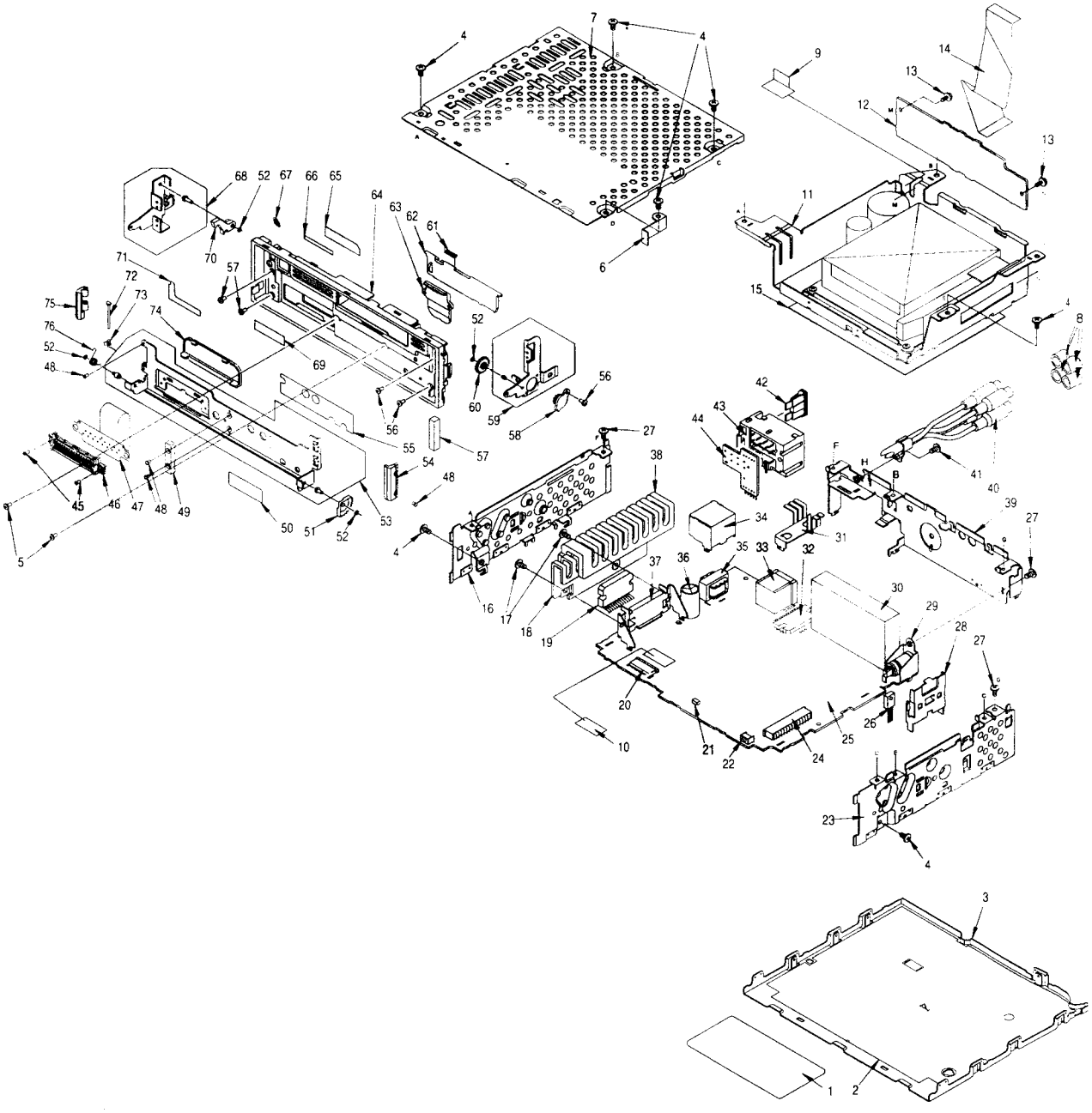
■ EXPLODE VIEW PARTS LIST

DCP section



NO.	PART NO	DESCRIPTION	QTY
1	DCP-401-700	DCP	1
1-1	714-2003-87	SCREW(M2x3)	2
1-2	371-5711-01	FACE PANEL	1
1-3	345-8670-00	RUBBER PART	1
1-4	380-5536-00	KNOB	1
1-5	382-6403-00	BUTTON(OPEN)	1
1-6	750-6721-00	SPRING	1
1-7	382-6407-00	BUTTON(MUTE.P/P)	1
1-8	382-6405-00	BUTTON(FUNC)	1
1-9	382-6404-00	BUTTON(SEARCH)	1
1-10	335-6688-00	ILLUMI PLATE	1
1-11	382-6109-00	BUTTON (EJECT)	1
1-12	335-6493-02	REAR COVER	1
1-13	382-6406-00	BUTTON(A-M)	1
1-14	335-6686-00	ILLUMI PLATE	2
1-15	335-6689-00	IR FILTER	1
1-16	382-6408-00	BUTTON(1,4)	1
1-17	382-6409-00	BUTTON(2,5)	1
1-18	382-6410-00	BUTTON(3,6)	1
1-19	335-6778-00	ILLUMI PLATE	1
1-20	335-6687-00	ILLUMI PLATE(R)	1
1-21	382-6412-00	BUTTON(AF)	1
1-22	382-6411-00	BUTTON(PS/AS, PT)	1
1-23	382-6435-00	BUTTON(TA, BAND)	1
1-24	382-6436-00	BUTTON(DISP, Z-E)	1
1-25	347-6744-00	DOUBLE FACE	2
1-26	370-5993-00	ESCUTCHEON	1
1-27	347-6695-00	DOUBLE FACE	2

NO.	PART NO	DESCRIPTION	QTY
1-28	347-6704-00	SURGE FILM	1
1-29	347-6745-00	DOUBLE FACE	6
1-30	373-0985-00	DIAL CVR	1
1-31	716-0872-12	PAD SCREW(M1.7x8)	4
1-32	347-6698-00	SHADE	2
1-33	347-6697-00	SHADE	1
1-34	347-6699-00	FILM	2
1-35	331-3309-00	LCD CVR	1
1-36	379-1232-41	INDICATOR	1
1-37	347-6694-00	FILM	1
1-38	347-6692-00	FILM	1
1-39	335-6673-00	LCD ILLUMI	1
1-40	347-6693-00	REFLECTOR	1
1-41	335-6674-00	LCD HOLDER	1
1-42	001-7046-00	DIODE	1
1-43	345-8681-00	LAMP CAP	5
1-44	017-0444-00	PILOT LAMP(14V 50mA)	5
1-45	016-9900-84	VR W/SHAFT	1
1-46	331-3337-00	VR HOLDER	1
1-47	013-6504-50	LUMI SWITCH	1
1-48	076-0647-00	PLUG	1
1-49	051-6013-00	IC	1
1-50	013-6305-50	TACT SWITCH	18
1-51	060-4008-00	IR RECEIVE	1
1-52	017-0433-62	PILOT LAMP(14V 50mA)	1
1-53	039-2075-00	SWITCH PWB (WITHOUT COMPONENTS)	1



NO	PART NO	DESCRIPTION	Q'TY
1	286-9916-00	SET PLATE	1
2	347-5918-00	INSULATOR	1
3	304-0460-01	LOWER-CVR	1
4	731-3006-80	TAP TIGHT SCREW(M3x6)	7
5	780-2004-01	SCREW(M2x4)	2
6	331-2744-00	STOPPER	1
7	303-0472-00	UPPER-CVR	1
8	345-3799-20	RUBBER PART	4
9	347-6740-00	SHADE	1
10	347-6215-00	SPACER	1
11	948-0618-02	TAPE MECH	1
12	039-1978-00	MECH PWB (WITHOUT COMPONENTS)	1
13	716-0878-00	IT SCREW	2
14	816-2478-00	FLAT CABLE	1
15	347-6326-00	SHADE	1
16	305-0274-31	SIDE-CVR(L)	1
17	731-3008-89	TAP TIGHT SCREW(M3x8)	2
18	313-1818-00	HEAT SINK	1
19	051-2041-00	IC	1
20	074-1198-68	OUTLET SOCKET	1
21	001-7011-96	DIODE	1
22	013-6100-00	SWITCH	1
23	305-0275-30	SIDE-CVR(R)	1
24	074-1186-22	OUTLET SOCKET	1
25	039-2095-01	MAIN PWB (WITHOUT COMPONENTS)	1
26	103-2012-00	TRANSISTOR	1
27	714-3006-81	MACHINE SCREW(M3x6)	3
28	313-1651-21	HEAT SINK	1
29	092-4000-51	ANT RECEPT	1
30	880-2089C	TUNER	1
31	313-1772-00	HEAT SINK	1
32	051-3261-00	IC	1
33	074-1126-10	OUTLET SOCKET	1
34	331-2820-00	SHIELD CASE	1
35	009-9006-60	CHOKE	1
36	042-0447-00	ALUMI-ELECTROLYTE-C	1
37	331-2255-20	IC-HOLDER	1
38	313-1817-00	HEAT SINK	1

NO.	PART NO	DESCRIPTION	Q'TY
39	307-0627-10	REAR CVR	1
40	855-5428-50	RCA PIN CORD	1
41	731-3006-80	TAP TIGHT SCREW(M3X6)	1
42	060-0057-57	AUTO FUSE(15A)	1
43	074-1285-00	OUTLET SOCKET	1
44	039-1400-30	ISO PWB (WITHOUT COMPONENTS)	1
45	716-3444-00	SCREW	2
46	074-1278-00	OUTLET SOCKET	1
47	039-1862-00	FPC	1
48	738-1722-17	PRECISION SCREW	4
49	335-6502-00	SLIDER	1
50	291-0092-00	STICKER	1
51	613-0684-00	FAN GEAR	1
52	746-0761-00	WASHER	4
53	946-0078-01	HOLDER ASS	1
54	335-6500-01	HOOK	1
55	290-7995-00	LABEL	1
56	780-2004-01	SCREW(M2x4)	5
57	345-8607-00	CUSHION	1
58	613-0687-00	GEAR DAMPER	1
59	946-0072-01	ARM-R-ASS	1
60	613-0683-00	GEAR	1
61	750-3343-00	SPRING	1
62	320-0562-02	DUSTPROOF CVR	1
63	335-5818-00	ILLUMI PLATE	1
64	370-5767-02	INNER-ES	1
65	347-5922-00	COVER FILM	1
66	347-5923-00	DOUBLE FACE	1
67	750-3341-00	SPRING	1
68	946-0071-01	ARM-L-ASS	1
69	347-6523-00	FPC SUPPORT	1
70	335-6498-00	HOOK ROCK	1
71	347-6483-00	HEAT PROTECT	1
72	341-1764-00	SHAFT	1
73	750-3454-00	SPRING	1
74	335-6499-00	CN-CVR	1
75	335-6501-01	HOOK DCP	1
76	750-3342-00	SPRING	1

■ ELECTRICAL PARTS LIST

Main PWB section (B1)

REF No.	PART No.	DESCRIPTION
C101	166-2201-00	22pF
C102	168-1032-05	0.01μF
C103	168-1032-05	0.01μF
C104	168-1022-05	1000pF
C105	183-1073-23	100μF/10V
C106	183-1073-23	100μF/10V
C107	042-0631-00	100μF/10V
C108	166-1011-00	100pF
C109	166-3311-00	330pF
C110	168-1022-05	1000pF
C111	168-1522-05	1500pF
C112	183-1053-63	1μF/50V
C113	166-1011-00	100pF
C114	166-1011-00	100pF
C115	168-2232-05	0.022μF
C116	168-2232-05	0.022μF
C117	183-4753-63	4.7μF/50V
C118	168-1045-06	0.1μF
C120	168-5622-05	5600pF
C121	168-3332-08	0.033μF
C122	168-1032-05	0.01μF
C124	042-9002-04	1μF/50V LN
C125	168-1232-05	0.012μF
C127	166-2201-00	22pF
C128	183-4763-33	47μF/16V
C129	183-1063-53	10μF/35V
C131	168-1022-05	1000pF
C137	168-1022-05	1000pF
C140	166-1011-00	100pF
C141	166-1011-00	100pF
C151	168-4732-08	0.047μF
C201	166-6811-00	680pF
C202	166-8211-00	820pF
C203	166-8201-00	82pF
C204	166-4701-00	47pF
C206	183-2253-63	2.2μF/50V
C207	183-4763-33	47μF/16V
C208	166-5611-00	560pF
C209	168-1032-05	0.01μF
C211	168-2232-05	0.022μF
C212	168-2232-05	0.022μF
C213	168-1032-05	0.01μF
C214	166-3311-00	330pF
C216	168-1045-06	0.1μF
C302	172-1041-11	0.1μF
C303	172-1030-11	0.01μF
C305	183-1063-53	10μF/35V
C405	183-1063-53	10μF/35V
C409	168-1032-05	0.01μF
C410	168-1032-05	0.01μF
C411	168-1032-05	0.01μF
C415	168-1045-06	0.1μF
C416	183-1073-23	100μF/10V
C417	183-1063-53	10μF/35V
C501	168-1045-06	0.1μF
C502	168-1045-06	0.1μF
C503	168-1045-06	0.1μF
C505	183-1053-63	1μF/50V
C506	183-1053-63	1μF/50V
C509	042-0631-00	100μF/10V
C510	182-1063-33	10μF/16V
C511	182-1063-33	10μF/16V
C512	182-1063-33	10μF/16V
C513	182-1063-33	10μF/16V
C514	183-1063-53	10μF/35V
C516	168-1022-05	1000pF
C517	168-2222-05	2200pF
C518	168-2222-05	2200pF
C523	168-1032-05	0.01μF
C526	183-1063-53	10μF/35V
C527	183-1063-53	10μF/35V
C528	183-1063-53	10μF/35V
C529	183-1063-53	10μF/35V
C530	182-4763-23	47μF/10V
C531	168-1045-06	0.1μF
C601	172-2231-11	0.022μF
C602	042-0447-00	2200μF/16V
C603	183-2253-63	2.2μF/50V
C604	183-2263-33	22μF/16V
C605	183-4763-33	47μF/16V
C606	182-4746-62	0.47μF/50V NP
C607	182-4746-62	0.47μF/50V NP
C608	182-4746-62	0.47μF/50V NP
C609	182-4746-62	0.47μF/50V NP
C611	172-1041-11	0.1μF
C612	172-1041-11	0.1μF
C613	172-1041-11	0.1μF
C614	172-1041-11	0.1μF

REF No.	PART No.	DESCRIPTION
C615	183-1053-63	1μF/50V
C616	183-1053-63	1μF/50V
C618	166-1011-00	100pF
C619	166-1011-00	100pF
C620	166-1011-00	100pF
C621	166-1011-00	100pF
C701	168-4732-08	0.047μF
C801	166-2201-00	22pF
C802	166-2201-00	22pF
C803	168-4732-08	0.047μF
C804	168-4732-08	0.047μF
C805	168-1032-05	0.01μF
C806	183-4763-33	47μF/16V
C807	042-9003-00	100μF/10V
C808	168-1032-05	0.01μF
C815	168-1045-06	0.1μF
C816	168-1022-05	1000pF
C817	166-1011-00	100pF
C818	168-1032-05	0.01μF
C820	168-4732-08	0.047μF
C832	166-1011-00	100pF
C833	166-1011-00	1K 1/16W
C834	166-1011-00	1K 1/16W
C835	166-1011-00	1K 1/16W
C901	183-2263-33	22μF/16V
D201	001-0330-00	1SS119
D202	001-0330-00	1SS119
D301	001-0376-41	MTZ7.5JB
D302	001-0376-25	MTZ4.7JB
D303	001-0466-01	S5688G
D304	001-0466-01	S5688G
D306	001-0466-01	S5688G
D307	001-0330-00	1SS119
D308	001-0330-00	1SS119
D309	001-0330-00	1SS119
D402	001-0376-47	MTZ9.1JB
D404	001-0330-00	1SS119
D501	001-0376-21	MTZ3.9JB
D601	001-0592-00	RM4
D602	001-0466-01	S5688G
D603	001-0466-01	S5688G
D604	001-0466-01	S5688G
D605	001-0466-01	S5688G
D606	001-0466-01	S5688G
D607	001-0466-01	S5688G
D608	001-0466-01	S5688G
D609	001-0466-01	S5688G
D610	001-0330-00	1SS119
D611	001-0376-44	MTZ8.2JB
D701	001-0330-00	1SS119
D702	001-0330-00	1SS119
D801	001-0330-00	1SS119
D802	001-7011-06	LED
D803	001-0376-47	MTZ9.1JB
D901	001-0330-00	1SS119
D902	001-0330-00	1SS119
IC201	051-1819-50	TDA7479D
IC202	051-0350-55	NJM4558M
IC301	051-3261-00	BA4906
IC501	051-5016-90	TDA7404D
IC502	051-0556-01	NJM2058M
IC601	051-2041-00	LA47503
IC701	051-7400-06	HD74LS07
IC801	052-1913-20	D178018A
L101	010-4046-00	5.6uH
L102	010-2230-88	220uH
L103	010-2230-81	56uH
L104	010-2230-88	220uH
L201	010-2230-88	220uH
L502	010-2285-57	CHIP-L
L503	010-2285-57	CHIP-L
L504	010-2285-57	CHIP-L
L505	010-2285-57	CHIP-L
L601	009-9006-60	CHOKE
L701	010-2230-76	22uH
L801	010-2230-88	220uH
L803	010-2230-76	22uH
L804	010-2230-64	2.2uH
Q101	108-0669-00	K669
Q102	102-2712-51	C2712LG
Q103	102-2712-51	C2712LG
Q105	103-1306-00	D1306
Q107	125-0002-03	RN2403
Q108	125-2004-02	RN1402
Q201	125-0002-02	RN2402
Q204	125-2004-02	RN1402
Q205	125-2004-02	RN1402
Q301	102-2712-51	C2712LG

REF No.	PART No.	DESCRIPTION
Q303	102-2712-51	C2712LG
Q304	102-2712-51	C2712LG
Q305	101-1237-00	B1237
Q306	125-0002-02	RN2402
Q307	125-0002-02	RN2402
Q402	125-0002-02	RN2402
Q403	125-2004-06	RN1406
Q404	125-2004-06	RN1406
Q405	101-1243-00	B1243
Q406	103-2012-00	D2012
Q501	103-1306-00	D1306
Q502	103-1306-00	D1306
Q503	103-1306-00	D1306
Q504	103-1306-00	D1306
Q601	125-0002-02	RN2402
Q602	102-2712-51	C2712LG
Q603	125-2004-02	RN1402
Q701	125-2004-02	RN1402
Q802	101-1243-00	B1243
Q803	125-2004-02	RN1402
Q805	103-1858-00	D1858
Q806	100-1162-00	A1162
Q807	125-2004-02	RN1402
Q901	100-1162-00	A1162
Q902	102-2712-51	C2712LG
R102	119-1021-10	1K 1/16W
R103	119-4721-10	4.7K 1/16W
R104	119-3311-10	330 1/16W
R105	119-4721-10	4.7K 1/16W
R106	119-1021-10	1K 1/16W
R107	111-3311-91	330 1/4W
R108	119-5631-10	56K 1/16W
R109	119-6821-10	6.8K 1/16W
R110	119-1021-10	1K 1/16W
R111	119-2221-10	2.2K 1/16W
R112	119-1021-10	1K 1/16W
R113	119-5631-10	56K 1/16W
R114	119-6821-10	6.8K 1/16W
R116	119-5611-10	560 1/16W
R125	119-5611-10	560 1/16W
R203	119-2221-10	2.2K 1/16W
R205	119-3321-10	3.3K 1/16W
R206	119-3331-10	33K 1/16W
R207	119-1031-10	10K 1/16W
R208	119-1231-10	12K 1/16W
R211	119-2211-10	220 1/16W
R212	119-1041-10	100K 1/16W
R301	119-4731-10	47K 1/16W
R302	119-2231-10	22K 1/16W
R303	119-2231-10	22K 1/16W
R305	119-2231-10	22K 1/16W
R308	119-4721-10	4.7K 1/16W
R309	119-4731-10	47K 1/16W
R311	111-1031-91	10K 1/4W
R312	119-1031-10	10K 1/16W
R313	119-4721-10	4.7K 1/16W
R314	119-1031-10	10K 1/16W
R401	119-1041-10	100K 1/16W
R403	119-1041-10	100K 1/16W
R404	119-1041-10	100K 1/16W
R405	119-1041-10	100K 1/16W
R406	119-4731-10	47K 1/16W
R413	111-1221-91	1.2K 1/4W
R414	119-4731-10	47K 1/16W
R415	111-2211-91	220 1/4W
R416	119-4731-10	47K 1/16W
R501	119-4721-10	4.7K 1/16W
R502	119-4721-10	4.7K 1/16W
R503	119-1021-10	1K 1/16W
R504	119-1021-10	1K 1/16W
R505	119-1031-10	10K 1/16W
R506	119-1031-10	10K 1/16W
R507	119-3311-10	330 1/16W
R508	119-3311-10	330 1/16W
R509	119-1021-10	1K 1/16W
R510	119-1021-10	1K 1/16W
R511	119-1031-10	10K 1/16W
R512	119-1031-10	10K 1/16W
R513	119-3311-10	330 1/16W
R514	119-3311-10	330 1/16W
R515	119-4721-10	4.7K 1/16W
R516	119-4721-10	4.7K 1/16W
R517	119-4721-10	4.7K 1/16W
R518	119-4721-10	4.7K 1/16W
R519	119-4721-10	4.7K 1/16W
R520	119-4721-10	4.7K 1/16W
R524	119-1031-10	10K 1/16W
R525	119-1031-10	10K 1/16W

Main PWB section(B1)

REF No.	PART No.	DESCRIPTION
R526	119-1031-10	10K 1/16W
R527	119-1031-10	10K 1/16W
R528	119-1031-10	10K 1/16W
R529	119-1031-10	10K 1/16W
R530	119-1031-10	10K 1/16W
R531	119-1031-10	10K 1/16W
R532	119-1031-10	10K 1/16W
R533	119-1031-10	10K 1/16W
R534	119-1031-10	10K 1/16W
R535	119-1031-10	10K 1/16W
R536	119-1031-10	10K 1/16W
R537	111-3311-91	330 1/4W
R602	119-1031-10	10K 1/16W
R604	119-1231-10	12K 1/16W
R610	119-4721-10	4.7K1/16W
R612	119-1021-10	1K 1/16W
R613	119-2231-10	22K 1/16W
R614	119-1031-10	10K 1/16W
R701	119-4721-10	4.7K 1/16W
R702	119-4721-10	4.7K 116W
R703	119-1021-10	1K 1/16W
R704	119-4721-10	4.7K 1/16W
R705	119-1021-10	1K 1/16W
R706	119-4721-10	4.7K 1/16W
R707	119-1021-10	1K 1/16W

REF No.	PART No.	DESCRIPTION
R708	111-1001-91	10 1/4W
R709	119-1031-10	10K 1/16W
R711	119-4731-10	47K 1/16W
R801	119-1041-10	100K 1/16W
R802	119-2221-10	2.2K 1/16W
R803	119-1031-10	10K 1/16W
R804	119-2221-10	2.2K 1/16W
R805	119-1031-10	10K 1/16W
R806	119-1031-10	10K 1/16W
R810	119-2231-10	22K 1/16W
R811	119-1021-10	1K 1/16W
R812	119-1021-10	1K 1/16W
R819	119-1041-10	100K 1/16W
R820	119-1041-10	100K 1/16W
R821	119-2221-10	2.2K 1/16W
R822	119-1031-10	10K 1/16W
R823	119-2221-10	2.2K 1/16W
R825	111-4711-91	470 1/4W
R827	119-1041-10	100K 1/16W
R828	119-2221-10	2.2K 1/16W
R830	119-1031-10	10K 1/16W
R831	119-1021-10	1K 1/16W
R832	119-1031-10	10K 1/16W
R833	119-2231-10	22K 1/16W
R835	119-1031-10	10K 1/16W

REF No.	PART No.	DESCRIPTION
R836	119-1021-10	1K 1/16W
R901	119-1031-10	0K 1/16W
R902	119-4721-10	4.7K 1/16W
R903	119-4731-10	47K 1/16W
R904	111-4721-91	4.7K 1/4W
R905	119-4731-10	47K 1/16W
R906	119-4731-10	47K 1/16W
CN001	074-1198-68	PLUG
CN102	074-1285-00	OUTLET SOCKET
CN106	074-1186-22	PLUG
CN501	855-5428-50	RCA
CN701	074-1126-10	PLUG
SUP101	060-0122-20	SURGE
VR101	012-4738-13	470K
ANT	092-4000-51	ANT
X201	061-3013-00	CRYSTAL 4.332MHz
X801	061-1064-00	CRYSTAL 4.5MHz
SW301	013-6100-00	SWITCH
TUN	880-2089C	TUNER
0-9	815-2264-00	SHIELDED WIRE

Switch PWB section (B2)

REF No.	PART No.	DESCRIPTION
C701	168-1022-05	1000pF
C702	168-4732-08	0.047µF
C703	168-4732-08	0.047µF
C704	042-0416-01	10µF/6.3V
C705	042-0416-01	10µF/6.3V
D701	001-7046-00	LED
D703	001-0528-14	MA8030L
D704	001-0528-29	MA8051M
D706	001-0528-41	MA8075M
D707	001-0528-41	MA8075M
D708	001-0528-41	MA8075M
D709	001-0528-41	MA8075M
IC701	051-6013-00	LC75854W
IR701	060-4008-00	IR RECEIVER
LCD701	379-1232-41	LCD
P701	076-0647-00	PLUG
PL701	017-0444-00	14V 50mA
PL702	017-0444-00	14V 50mA
PL703	017-0444-00	14V 50mA
PL704	017-0444-00	14V 50mA

REF No.	PART No.	DESCRIPTION
PL705	017-0444-00	14V 50mA
PL706	017-0433-62	14V 50mA
Q701	100-1162-50	A1162
Q702	125-2004-03	RN1403
Q703	125-2004-03	RN1403
R701	119-4731-10	47K 1/16W
R702	119-1031-10	10K 1/16W
R703	119-1011-10	100 1/16W
R704	119-1021-10	1K 1/16W
R705	119-1011-10	100 1/16W
R706	119-2711-10	270 1/16W
R707	119-2211-10	220 1/16W
R708	119-8211-10	820 1/16W
R709	119-1041-10	100K 1/16W
R710	119-3921-10	3.9K 1/16W
R711	119-2211-10	220 1/16W
R712	119-2221-10	2.2K 1/16W
R714	119-2221-10	2.2K 1/16
R715	119-3311-10	330 1/16W
S701	013-6305-00	CHIP-SW

REF No.	PART No.	DESCRIPTION
S702	013-6305-00	CHIP-SW
S703	013-6305-00	CHIP-SW
S704	013-6305-00	CHIP-SW
S705	013-6305-00	CHIP-SW
S706	013-6305-00	CHIP-SW
S707	013-6305-00	CHIP-SW
S708	013-6305-00	CHIPSW
S709	013-6305-00	CHIP-SW
S710	013-6305-00	CHIP-SW
S711	013-6305-00	CHIP-SW
S712	013-6305-00	CHIP-SW
S713	013-6305-00	CHIP-SW
S714	013-6305-00	CHIP-SW
S715	013-6305-00	CHIP-SW
S716	013-6305-00	CHIP-SW
S717	013-6305-00	CHIP-SW
S718	013-6305-00	CHIP-SW
S721	013-6511-00	CHIP-SW
VR720	016-9900-84	VR W/SHAFT

ISO PWB section(B3)

REF No.	PART No.	DESCRIPTION
CN102	074-1285-01	

REF No.	PART No.	DESCRIPTION
FUSE	060-0057-57	15A

Mech PWB section(B4)

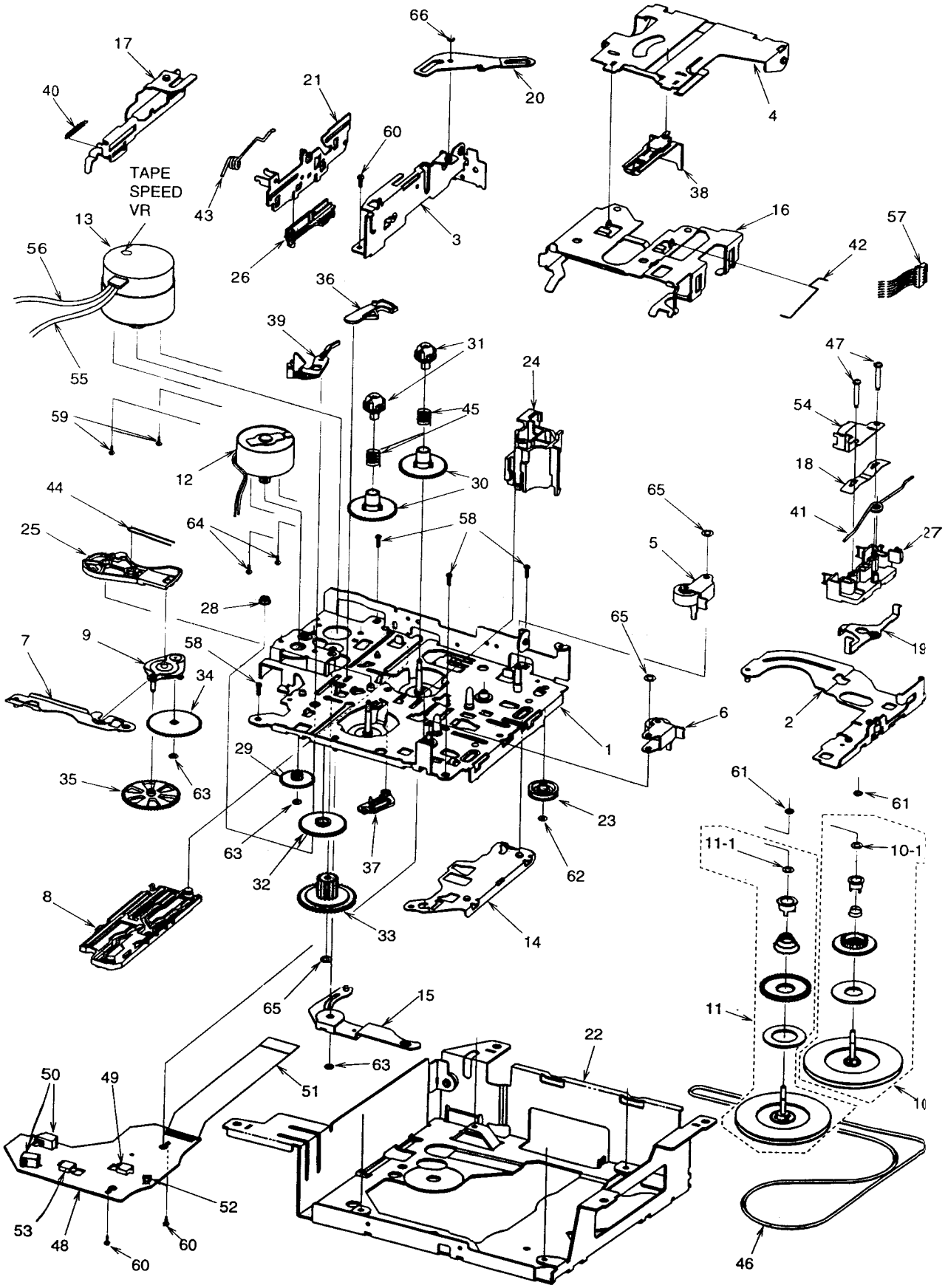
REF No.	PART No.	DESCRIPTION
IC 1	051-6048-08	BA6219BFP
IC 2	051-1546-90	BA3430FS
Q 1	102-2412-00	2SC2412
D 1	001-0529-25	MA8047L
C 1	178-1042-78	25V 0.1µF
C 2	178-2242-78	25V 0.22µF
C 3	183-4763-32	16V 47µF
C 4	176-3311-00	50V 330PF
C 5	176-3311-00	50V 330PF
C 6	176-3311-00	50V 330PF
C 7	176-3311-00	50V 330PF
C 8	183-6863-22	10V 68µF
C 9	183-6863-22	10V 68µF
C 10	172-1231-10	50V 0.012µF
C 11	172-1231-10	50V 0.012µF
C 12	183-4763-32	16V 47µF
C 13	183-4753-52	35V 4.7µF
C 14	183-4753-52	35V 4.7µF
C 15	176-5611-00	50V 560PF

REF No.	PART No.	DESCRIPTION
C 16	183-1043-62	50V 0.1µF
C 17	183-4753-52	35V 4.7µF
C 18	183-4753-62	50V 0.47µF
C 19	183-2263-32	16V 22µF
C 20	178-1042-78	25V 0.1µF
C 21	178-1042-78	25V 0.1µF
C 22	178-2242-78	25V 0.22µF
C 23	178-2242-78	25V 0.22µF
R 1	117-2221-10	1/10W 2.2K
R 10	117-1241-10	1/10W 120K
R 11	117-1241-10	1/10W 120K
R 12	117-1241-10	1/10W 120K
R 13	117-1011-10	1/10W 100
R 14	117-1011-10	1/10W 100
R 15	117-3341-10	1/10W 330K
R 16	117-3341-10	1/10W 330K
R 17	117-1131-10	1/10W 11K
R 18	117-1131-10	1/10W 11K
R 19	117-1531-10	1/10W 15K

REF No.	PART No.	DESCRIPTION
R 2	117-2231-10	1/10W 22K
R 20	117-1531-10	1/10W 15K
R 21	117-1031-10	1/10W 10K
R 22	117-1031-10	1/10W 10K
R 23	117-8211-10	1/10W 820
R 24	117-1811-10	1/10W 18K
R 25	117-2231-10	1/10W 22K
R 26	117-3391-10	1/10W 3.3
R 27	117-3301-10	1/10W 33
R 3	117-2231-10	1/10W 22K
R 4	117-6831-10	1/10W 68K
R 5	117-5631-10	1/10W 56K
R 6	117-3311-10	1/10W 330
R 7	117-2221-10	1/10W 2.2K
R 8	114-1001-21	2WSS 10
R 9	117-1241-10	1/10W 120K
CN 1	074-0986-11	OUTLET SOCKET
CN 2	076-0351-06	PLUG

■ EXPLODE VIEW

Tape mechanism section: 948-0618-02



■ PARTS LIST

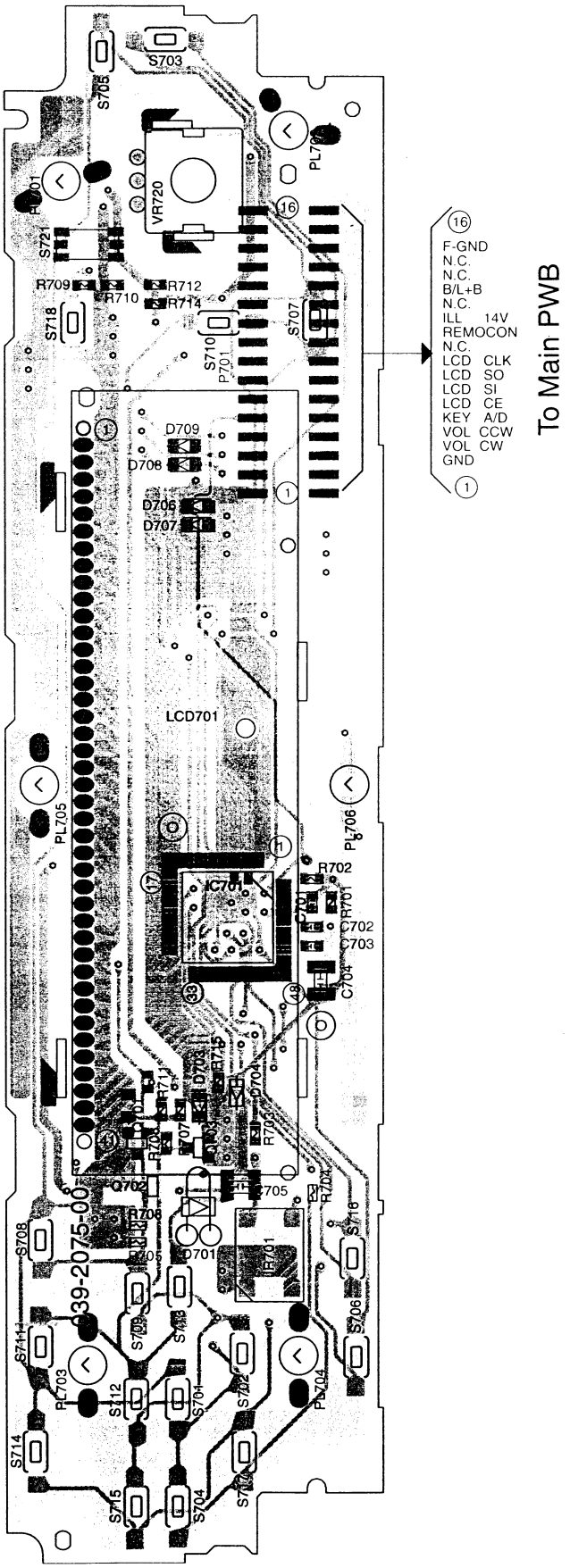
Tape mechanism section: 948-0618-02

NO.	PART NO.	DESCRIPTION	Q'TY
1	----------	MAIN CHASSIS ASSY Z	1
2	658-0234-01	SLIDE CHASSIS ASSY	1
3	658-0234-02	SIDE BKT ASSY	1
4	658-0234-03	CASSETTE HANGER ASSY	1
5	658-0234-04	PINCH ARM F ASSY	1
6	658-0234-05	PINCH ARM R ASSY	1
7	658-0234-06	GEAR BASE LINK ASSY	1
8	658-0234-07	MODE RACK ASSY	1
9	658-0234-08	GEAR BASE ASSY	1
10	658-0234-09	FLYWHEEL ASSY F	1
10-1	658-0223-63	WASHER(2.1X4.0)	2
11	658-0234-10	FLYWHEEL ASSY R	1
11-1	658-0223-63	WASHER(2.1X4.0)	2
12	658-0234-11	SUB MOTOR ASSY	1
13	658-0234-12	MAIN MOTOR ASSY	1
14	658-0234-13	DIRECTION PLATE	1
15	658-0234-14	DIRECTION LINK	1
16	658-0234-15	CASSETTE HOLDER	1
17	658-0234-16	EJECT CAM LIMITER	1
18	658-0234-17	HEAD SUPPORT SPG	1
19	658-0234-18	PINCH SPG ARM	1
20	658-0234-19	LOAD ARM	1
21	658-0234-20	EJECT CAM PLATE	1
22	658-0223-20	BOTTOM PLATE	1
23	658-0223-21	IDLE PULLEY(A1)	1
24	658-0234-22	CASSETTE GUIDE	1
25	658-0234-23	GEAR BASE ARM	1
26	658-0234-24	LOAD RACK	1
27	658-0234-25	TAPE GUIDE	1
28	658-0234-26	TAPE DETECTOR COLLER	1
29	658-0234-27	REDUCTION GEAR A	1
30	658-0234-28	REEL SPINDLE	2
31	658-0234-29	REEL DRIVER	2
32	658-0234-30	REDUCTION GEAR B	1
33	658-0234-31	MODE GEAR	1

NO.	PART NO.	DESCRIPTION	Q'TY
34	658-0234-32	TAKE UP GEAR	1
35	658-0234-33	REFLECTOR GEAR	1
36	658-0234-34	RACK LINK	1
37	658-0223-32	MODE SW ACTUATER	1
38	658-0234-35	CASSETTE CATCH	1
39	658-0234-36	TAPE DETECTOR	1
40	658-0234-37	EJECT CAM PLATE SPG	1
41	658-0234-38	PINCH ARM SPG	1
42	658-0234-39	HOLDER STABILIZER SPG	1
43	658-0234-40	HOLDER CUSHION SPG	1
44	658-0234-41	GEAR BASE SPG	1
45	658-0234-42	REEL DRIVER SPG	2
46	658-0234-43	BELT	1
47	658-0234-44	AZIMUTH SCREW	2
48	658-0234-45	REEL PWB (WITHOUT COMPONENT)	1
49	658-0234-46	SW(ESE22MH32)	1
50	658-0234-47	SW(MPU11750MLB0)	2
51	658-0234-48	FLAT CABLE 11P-C	1
52	658-0234-49	PHOTO SENSOR(ON2170-QR FS)	1
53	658-0234-50	SW(MPU12370MLB0)	1
54	658-0234-51	HEAD(P-5344-CB-4552)	1
55	----------	MAIN MOTOR WIRE(BLACK)	1
56	----------	MAIN MOTOR WIRE(RED)	1
57	658-0234-52	JOINT WIRE ASSY 6P-AW	1
58	658-0223-57	SCREW (M2.6X4)	4
59	658-0223-58	SCREW (M2X2.5)	2
60	658-0234-53	SCREW (M2X2.5)	3
61	658-0223-60	WASHER(1.6X3.2)	2
62	658-0223-61	WASHER(1.2X3.2)	1
63	658-0223-62	WASHER(1.5X3.2)	3
64	658-0234-54	PRECISE SCREW(M1.7X3.0)	2
65	658-0223-64	WASHER(2.1X4.0)	1
66	658-0223-65	E-RING(1.5)	1

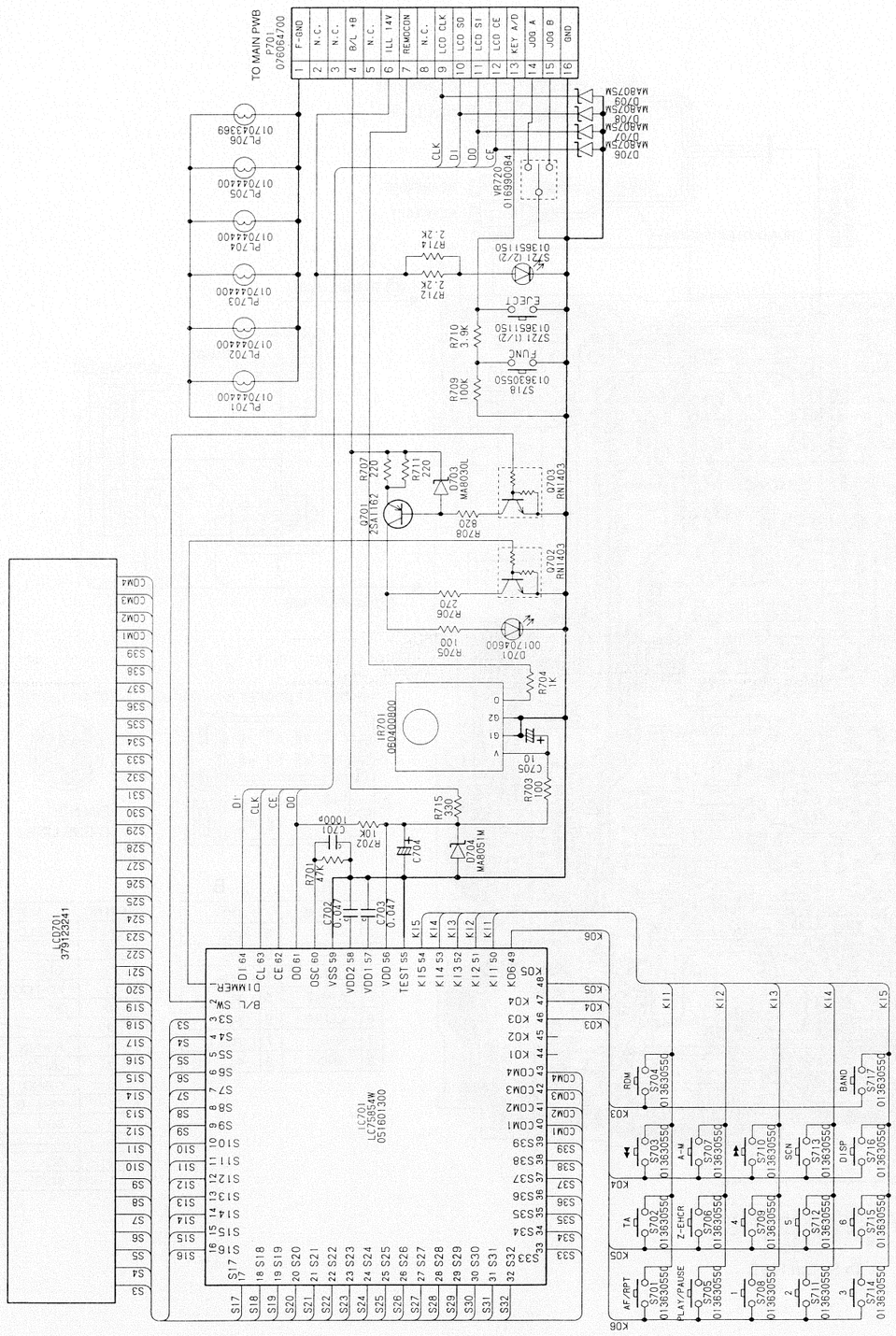
■ PRINTED WIRING BOARD:

Switch PWB section (B2)



CIRCUIT DIAGRAM:

Switch PWB section (B2)

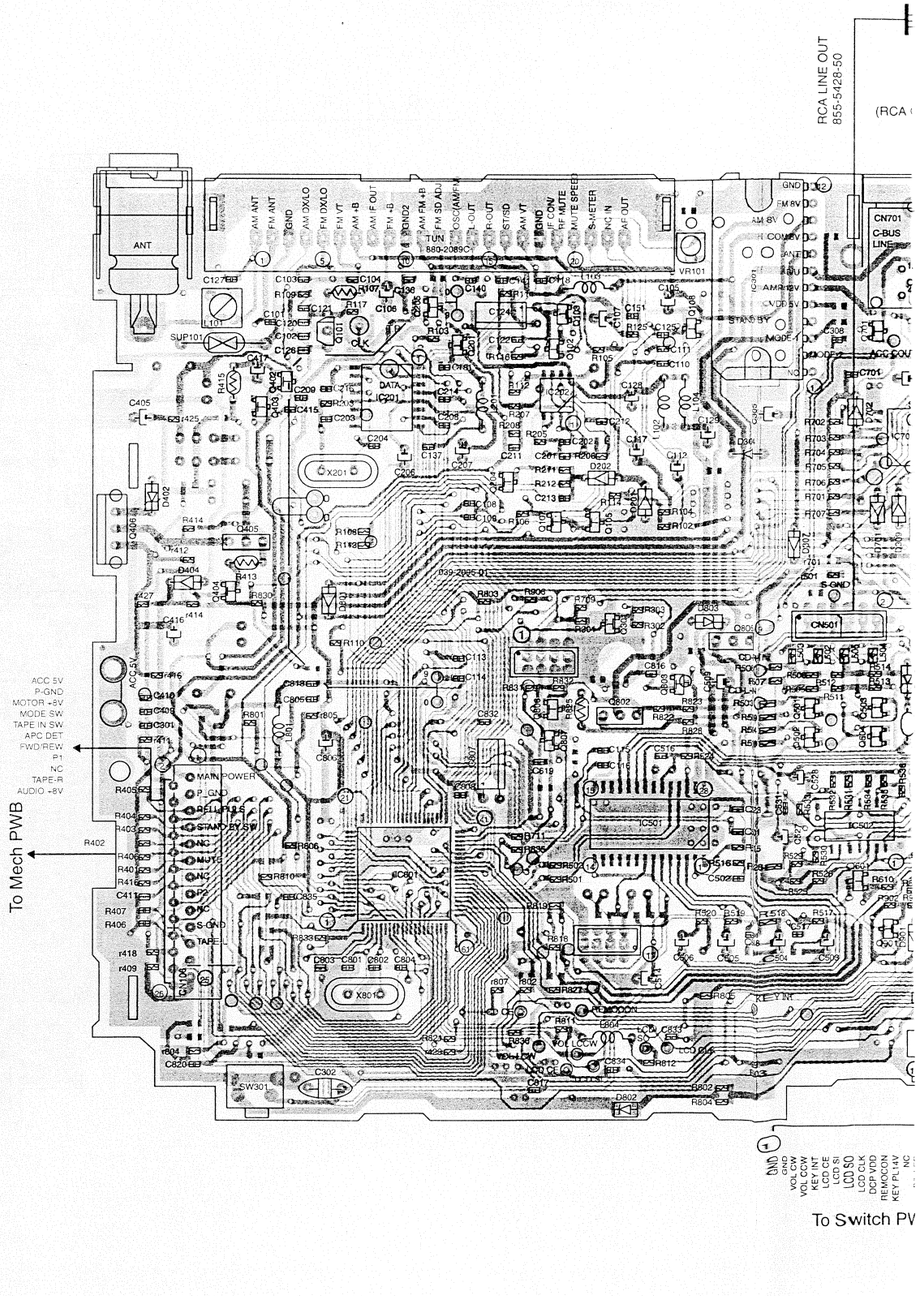


PRINTED WIRING BOARD:

Main PWB section (B1)

ISO PWB section (B3)

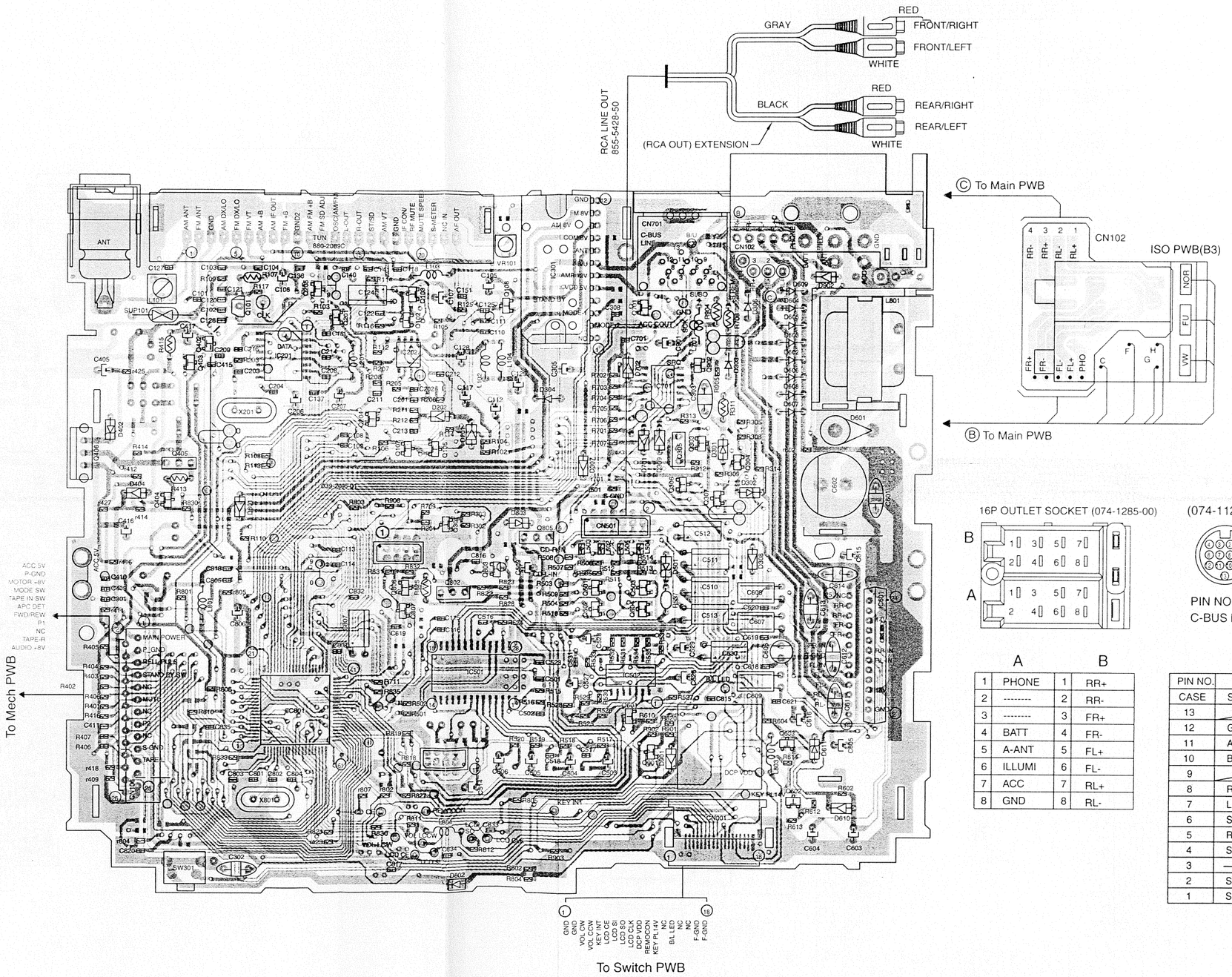
Q	IC
	IC301
Q205 Q103 Q101 Q108 Q701 Q201 Q102	
Q402 Q403 Q902	IC201 IC202 IC701
Q204 Q303 Q107 Q105 Q305 Q304 Q406 Q405	
Q306 Q404 Q307	
Q301 Q805	
Q803	
Q802 Q501 Q503 Q502 Q504 Q807	IC601 IC501 IC502
	IC801
Q601	
Q901 Q603	
Q602	



PRINTED WIRING BOARD:

Main PWB section (B1)
ISO PWB section (B3)

Q	IC
	IC301
Q205 Q103 Q101 Q108 Q701 Q201 Q102	
Q402 Q403 Q902	IC201 IC202 IC701
Q204	
Q303 Q107 Q105 Q305 Q304 Q406 Q405	
Q306 Q404 Q307	
Q301 Q805	
Q803	
Q802 Q501 Q503 Q502 Q504 Q807	
	IC601 IC501 IC502
	IC801
Q601	
Q901 Q603	
Q602	



16P OUTLET SOCKET (074-1285-00)

A		B	
1	PHONE	1	RR+
2	--------	2	RR-
3	--------	3	FR+
4	BATT	4	FR-
5	A-ANT	5	FL+
6	ILLUMI	6	FL-
7	ACC	7	RL+
8	GND	8	RL-

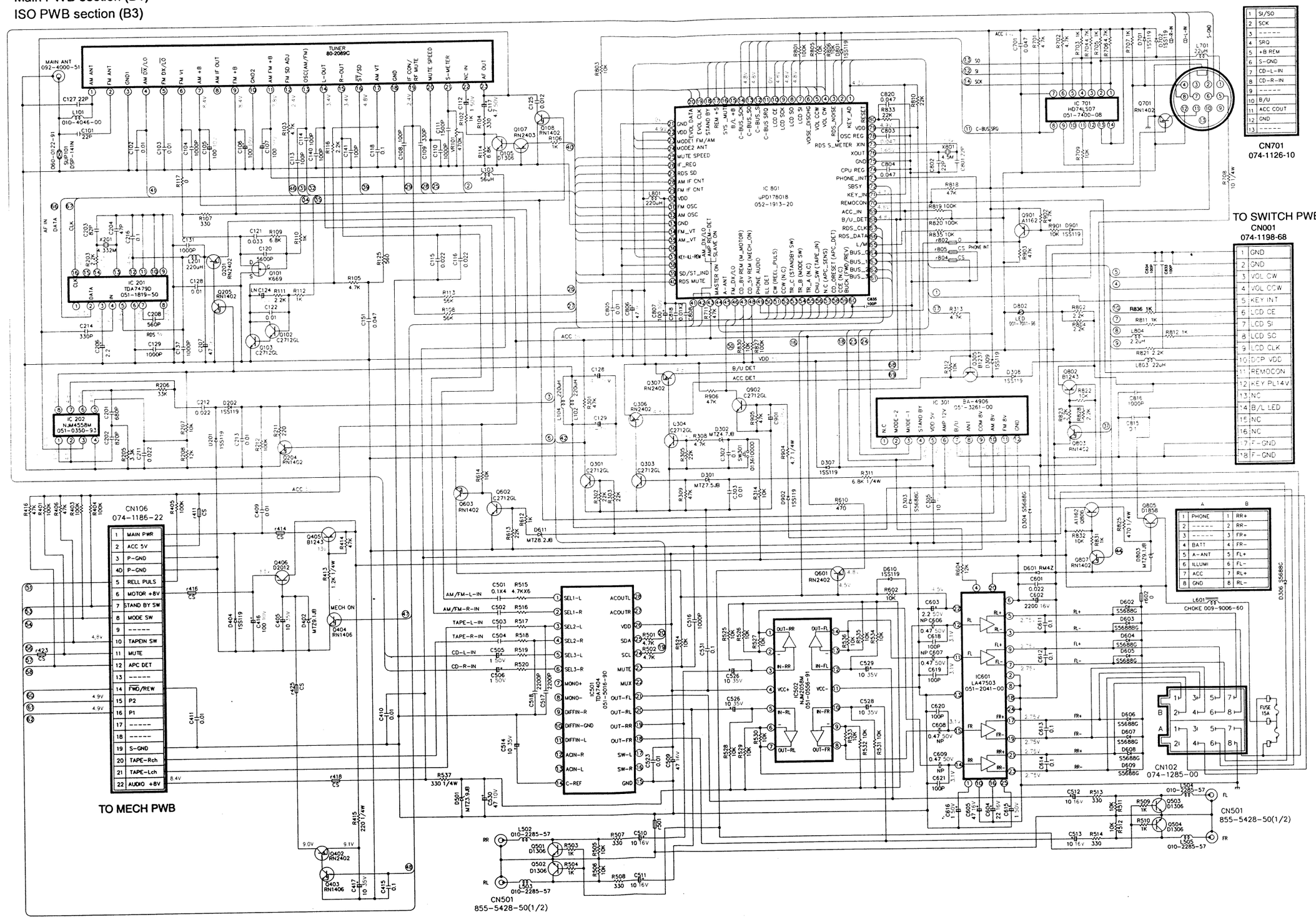
(074-1126-10)

PIN NO.
C-BUS LINE

PIN NO.	NOTE
CASE	SHIELD
13	
12	GND
11	ACC-CONT
10	B/U
9	
8	RCH-IN
7	LCH-IN
6	S-GND
5	REM +B
4	SRQ
3	
2	SCK
1	SO/SI

■ CIRCUIT DIAGRAM:

Main PWB section (B1)
ISO PWB section (B3)



1	SI/SO
2	SCK
3	------
4	SRQ
5	+B REM
6	S-GND
7	CD-L-IN
8	CD-R-IN
9	------
10	B/U
11	ACC COUT
12	GND
13	------

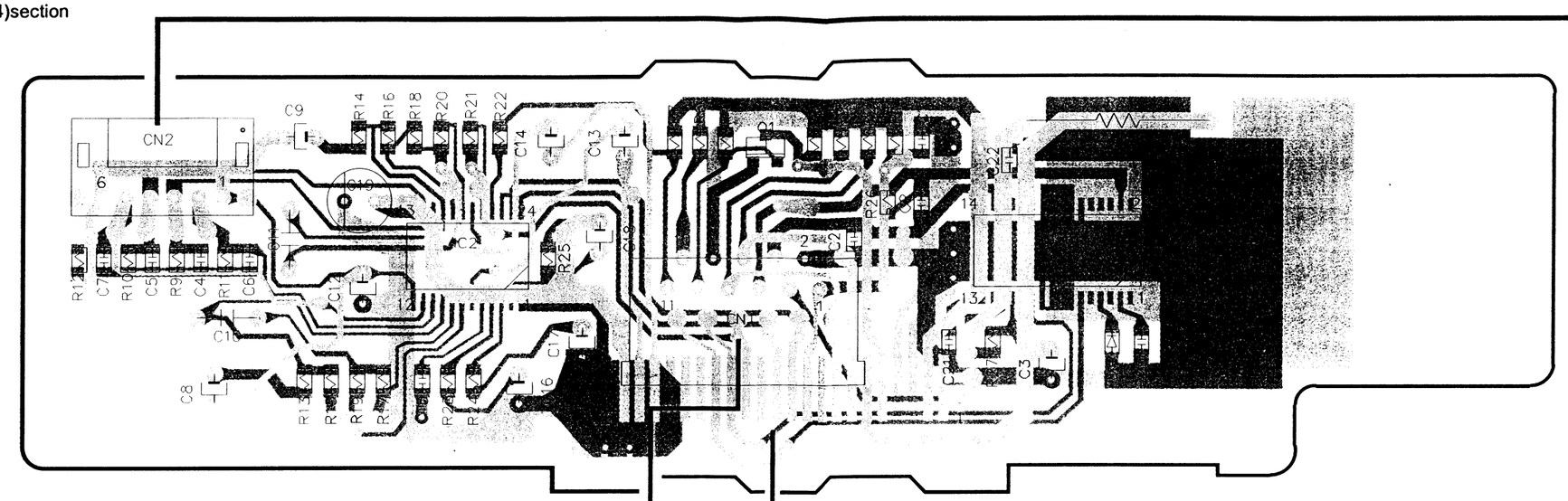
1	GND
2	GND
3	VOL CW
4	VOL CCW
5	KEY INT
6	LCD CE
7	LCD SI
8	LCD SO
9	LCD CLK
10	DISP VDD
11	REMOCON
12	KEY PL14V
13	NC
14	B/L LED
15	NC
16	NC
17	F-GND
18	F-GND

1	MAIN PWR
2	ACC 5V
3	P-GND
4D	P-GND
5	RELL PULS
6	MOTOR +8V
7	STAND BY SW
8	MODE SW
9	------
10	TAPEIN SW
11	MUTE
12	APC DET
13	------
14	FWD/REW
15	P2
16	P1
17	------
18	------
19	S-GND
20	TAPE-Rch
21	TAPE-Lch
22	AUDIO +8V

A		B	
1	PHONE	1	RR+
2	------	2	RR-
3	------	3	FR+
4	BATT	4	FR-
5	A-ANT	5	FL+
6	ILLUMI	6	FL-
7	ACC	7	RL+
8	GND	8	RL-

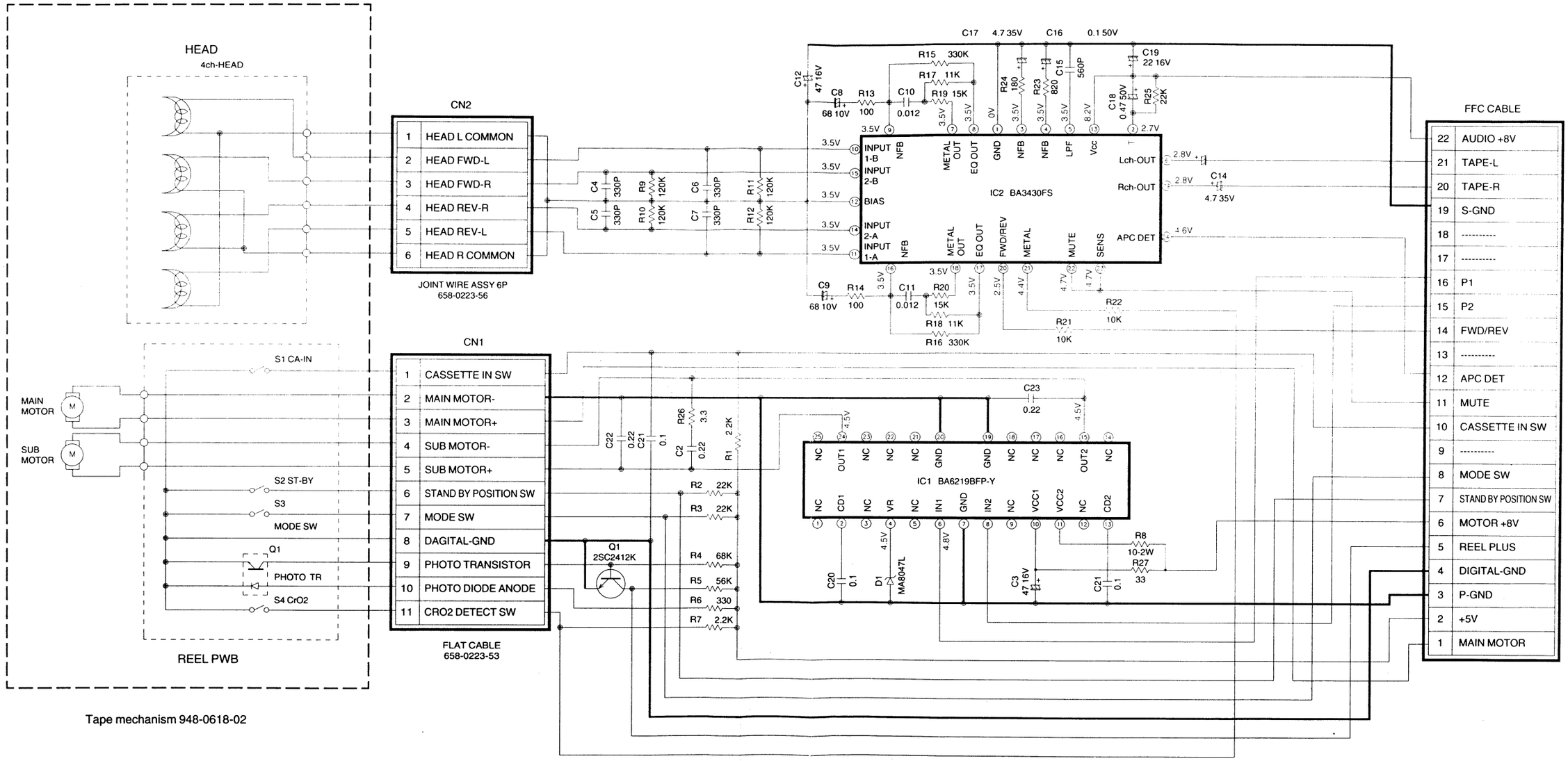
■ PRINTED WIRING BOARD:

MECH PWB (B4)section



■ CIRCUIT DIAGRAM:

MECH PWB section (B4)



Tape mechanism 948-0618-02

MECH PWB (B4) section